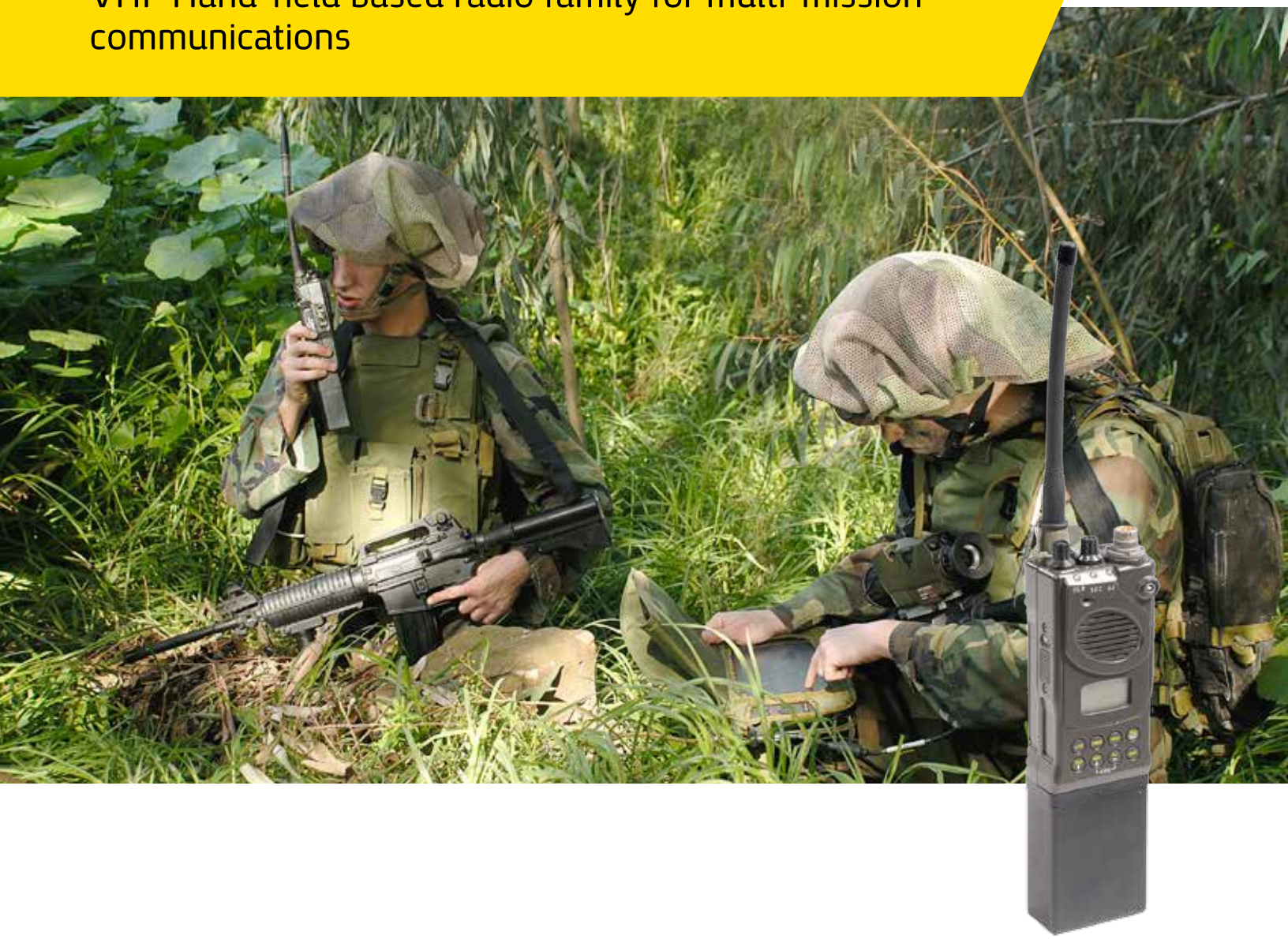
Tadiran CNR-710

VHF Hand-held based radio family for multi-mission communications



Elbit Systems™
Land and C4I

Tadiran CNR-710

VHF Hand-held based radio family for multi-mission communication

Modern theatres of operation demand real-time coordination between multiple ground, air, and marine forces. In today's complex tactical scenarios, easy-to-use, interoperable and secure communications are mission-critical.

The Tadiran CNR-710 from Elbit Systems offers all the combat-proven lightweight reliability that operatives expect, together with an uncompromising level of communications modularity, flexibility and security.

A Military, Combat-Proven, Modular Solution

Designed specifically to meet the challenges of multiple- force engagements, the Tadiran CNR-710 offers ground, sea, and air units VHF frequency band coverage and waveforms – enabling simple and secure voice and data communications with a wide range of forces, units and stations, from a single R/T unit. Offering the most comprehensive feature set of its class, the Tadiran CNR-710 is combat-proven, already exceeding the expectations of military organizations around the world. Lightweight, rugged and slim, the Tadiran CNR-710 leverages Tadiran's synchronous-orthogonal frequency hopping technology, and is fully compatible with legacy Tadiran frequency hopping systems like the CNR-710MB, CNR-900, CNR-9000 and CNR-9000HDR.

A Platform for Growth

Ideal for use at the tactical level, the flexible tadiran CNR-710 is the basic building block for creation of platoon-level and above voice and data communications infrastructure. With a complete line of add-ons, the Tadiran CNR-710 is available in variety of configuration packages for land, Sea and Airborne.The Tadiran CNR-710 enables a full range of communication solutions, from standalone radios to turnkey C^{4}I systems.

Feature-Rich

Leveraging over 40 years of combat-proven ingenuity, Elbit Systems designed the Tadiran CNR-710 with features that meet and exceed the rugged demands of military organizations worldwide, including:

Human Engineering

- Simple to operate, with all functions unambiguously identified
- Innovative, menu-driven interface, interactive display-guided operation
- Preset, DATA, COMSEC and ECCM parameters loaded via keyboard, keygun loader or another CNR-710
- Visual and audible alerts for security breach protection; frequency hopping indication in fixed frequency mode Clear indication in Secure mode
- Minimum operatior workload under battlefield conditions; auto data rate adaptation, auto synchronization, "clear" override to enable clear reception in SEC mode
- Quick emergency erasure of radio security parameters

Data Communications

- Powerful data rate and data mode (sync/async) adapter
- Sophisticated and robust error correction and high probability of error-free data transfer under severe communication conditions
- Synchronous and asynchronous modes of operation and interface

Built-in Information Security and Immunity Encryption (COMSEC)

- Very high level of voice and data security (digital encryption)

Anti-Jamming (ECCM)

- Wideband (or narrowband) frequency hopping over the entire frequency band 30 to 88 MHz
- Synchronous orthogonal frequency hopping minimizes friendly collocation interference and improves anti-jamming immunity
- PTT-oriented, self-distributed synchronization eliminates need for master stations and provides immediate operation readiness
- Very high probability of synchronization and resynchronization under severe jamming conditions
- Spoofing resistant

Special Features (optional)

- SMS-burst for powerful message transmission
- Communication controller enables the radio to work as an IP radio, allowing an IP network to be established over the tactical network
- Built-in Vocoder for high voice quality reception even under poor level channels
- Built-In GPS for system location report
- Scanning - up to 4 preset channels
- Selective call - individual and group communications

Logistic Flexibility

- Easy operational configuration based a common receiver-transmitter
- Reduced equipment down-time and logistical costs
- High MTBF
- Low MTTR; plug-in modular design at LRU and SRU levels

Configurations

The Tadiran CNR-710's modular design provides a variety of configurations geared to match any specific operational requirement. Manpack, Vehicular, Base, Marine and Airborne radio sets are easily configured around the common Receiver-Transmitter unit in the following configurations:

PRC-710
5w Handheld/Manpack Radio set

PRC-710/HP
20w Manpack Radio set

VRC-710
5w Vehicular/Base/ Marine Radio set

VRC-710/20
20w Vehicular/Base/ Marine/Airborne Radio set

Tadiran CNR-710

VHF Hand-held based radio family for multi-mission communications

Optional Ancillaries and Accessories

Elbit systems land and C4I-Tadiran offers a variety of optional accessories depending on the configuration and client operational requirement.

- **Power sources**
  - · Batteries - Primary and Rechargeable Lithium Ion batteries
  - · Battery chargers - Electrical, hand crank & solar
  - · Power Supplies - AC/DC & DC/DC
- **Antennas** – Variety of antennas for all configurations
- **Audio** – Standard & Control Handsets, headsets and loudspeakers
- **Remote control** – Variety of solutions depending on required operational scenarios
- **Software application** – Programming, Radio Network Management System (RNMS), Data communication etc.

Specification

General

- Frequency range: 30-88 MHz
- Channel spacing: 25 kHz
- Modulation: FM (F3E)
- Operation mode: Fixed frequency (FF): CLEAR and encrypted (COMSEC); Frequency hopping (FH): ECCM/ COMSEC,
- Channels: 10 preset channels
- Scanning: Up to 4 preset channels
- Selective call: Individual and group communications
- Built-in-test (BIT): On-line and operator-initiated test
- Squelch: 150 Hz tone or noise activated
- Power Source:
  - Hand-held/Manpack: LiMn02; Lithium Ion
  - High Power Manpack: Lithium; Lithium Ion
  - Vehicular/Base: 24-28V nominal
- GPS (optional): Embedded GPS
- Vocoder (optional): 2400, 4800 bps
- Comm. Controller (optional): STANAG 4XXX

Environmental:

- Operating temperature: -30°C to +65°C
- Storage temperature: -30°C to +71°C
- Relative humidity: 95%
- Immersion: 1 meter
- Dynamic and mechanical: MIL-STD-810F

Transmitter

- Power output:
  - Hand-held/Manpack: Up to 5W
  - High power manpack: Up to 20W
  - Airborne: Up to 20W
  - Vehicular/Base: Up to 50W

Anti Jamming (EECM)

- Technique: Orthogonal frequency hopping
- Synchronization: Own and homogeneous (w/o master station) Auto resynchronation capability
- Late entry: Without special procedures

Encryption (COMSEC)

- Type: Digital, very long non-linear “white” sequences
- Special characteristics: CLEAR override, COMSEC alarm

Data Communications:

- Type: Synchronous and asynchronous
- Rate: Up to 16 kbps Synchronous
- Interface: RS-232
- Special characteristics: Automatic rate adaptation

Elbit Systems Land and C4I Ltd.
2 H’amachshev St., Netanya 42507, Israel
E-mail: landc4i@elbitsystems.com www.elbitsystems.com/landc4i

Follow us on

The logo brand, product, service, and process names appearing herein are the trademarks or service marks of Elbit Systems Ltd., its affiliated companies or, where applicable, of other respective holders.
EP10-MKT-064 © 2016. This brochure contains Elbit Systems and others proprietary information